

Service Manual



Stereo Cassette Player

Mini Cassette

RQ-SX3



Colour

(K)...Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	
(EB)	Great Britain.	(K)

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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AR90 (AR90IV) MECHANISM SERIES

SPECIFICATIONS

Power Requirement:	Battery; DC 1.5V one "AA" size battery (not included) (Panasonic R6, LR6 or equivalent not included)
	Rechargeable Battery; DC 1.2V with an included Panasonic Rechargeable Battery (RP-BP62EYS) × 1
Power Output:	5mW + 5mW
Output Jack:	Headphones; 16Ω (mini jack Φ3.5)
Dimensions:	(W × H × D) 108.5 × 76.6 × 21.8mm
Weight:	184g (with rechargeable battery)

Charger: (E)	Input; AC 220V, 50Hz, 4W (RP-BC155EY-0) (included)
(EB)	Output; DC 1.2V, 350mA
	Input; AC 240V, 50Hz, 4W (RP-BC155EBYA) (included)
	Output; DC 1.2V, 350mA
Frequency Range: (-6dB)	15~20,000Hz (with a normal tape) 15~20,000Hz (with a CrO ₂ tape) 15~20,000Hz (with a Metal tape)
Motor:	Electrical governor motor
Track System:	4-track 2-channel stereo playback
Tape Speed:	4.8cm/s

Note: Design and specifications are subject to change without notice.
 Weight and dimensions are approximate.

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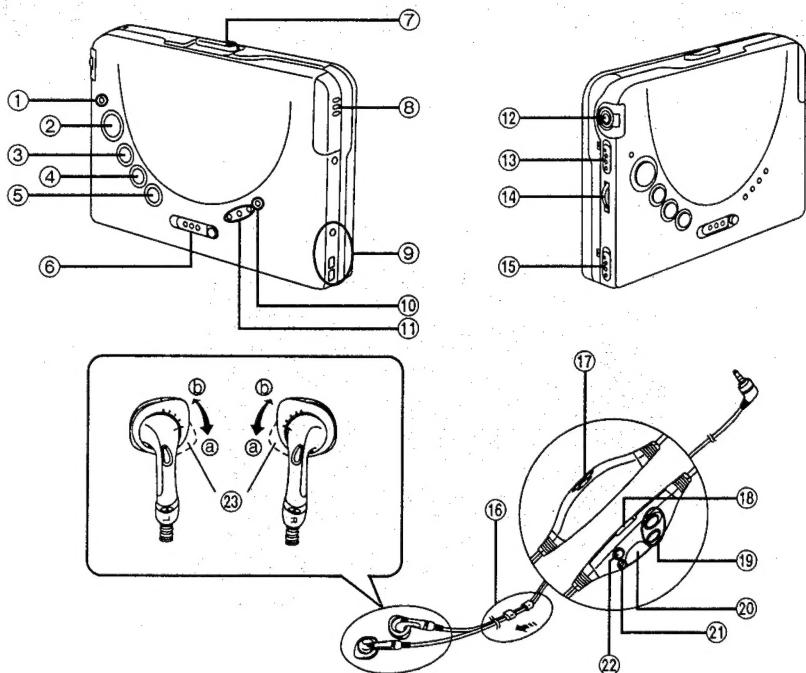
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Panasonic®

■ LOCATION OF CONTROLS

Main unit

- ① Operation/battery check indicator (OPR/BATT)
- ② Play/direction button (◀ ▶)
- ③ Stop button (■)
- ④ Rewind button (REW)
- ⑤ Fast forward button (FF)
- ⑥ Hold switch (PUSH HOLD)
- ⑦ Cassette compartment cover open lever (OPEN)
- ⑧ Rechargeable battery compartment cover
- ⑨ Connection part for battery case
- ⑩ Repeat indicator (ONE-REPEAT)
- ⑪ TPS, tone indicator (1/S-XBS, 2/TRAIN, 3/LIVE)
- ⑫ Headphones jack (Ω) 16Ω (φ3.5)
- ⑬ Dolby noise reduction selector (□□ NR)
- ⑭ Volume control (VOLUME)
- ⑮ Play mode selector (Blank skip, Reverse mode)



Stereo earphones with remote controller

⑯ Slider

When not in use slide up the slider to prevent entanglement of the cord.

⑰ Volume control (VOLUME)

⑱ Hold switch (HOLD)

⑲ +, - button

⑳ Tape operation button

㉑ Operation indicator (OPR)

Lights during operation.

㉒ ASC equalizer button (ASC EQ)

㉓ Fitting ring

■ Before using the stereo earphones

The size of the earpiece can be adjusted.

When it's too loose in the ear, turn the fitting ring to ⑴, when it's too tight, turn to ⑵.

■ HOLD OPERATION

When in the hold state, the unit will not operate even if one of its function button is pressed.

This is to prevent the unit being operated accidentally and ensuing wear on the battery.

Be sure to release the hold state before operation.

■ Before operating A

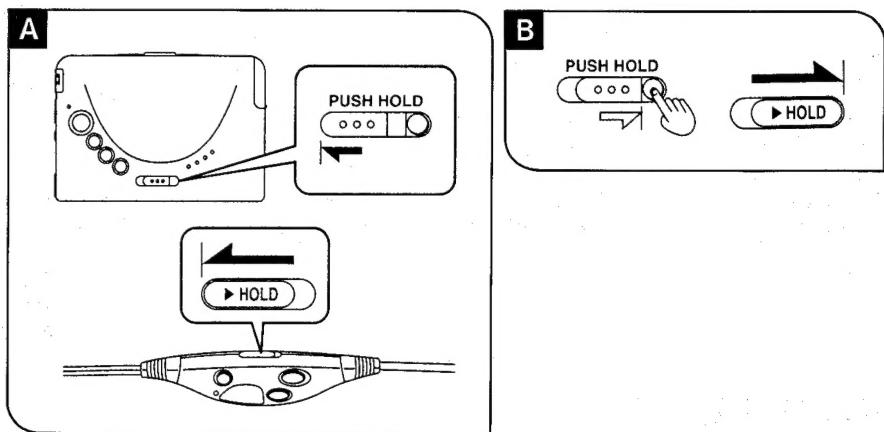
Release the hold state.

■ After operating B

(To prevent accidental operation)

Set to the HOLD position.

As for PUSH HOLD on the main unit, simply press the button.



■ REMOTE CONTROL OPERATION

ⓐ Tape operation button

ⓑ ASC EQ button

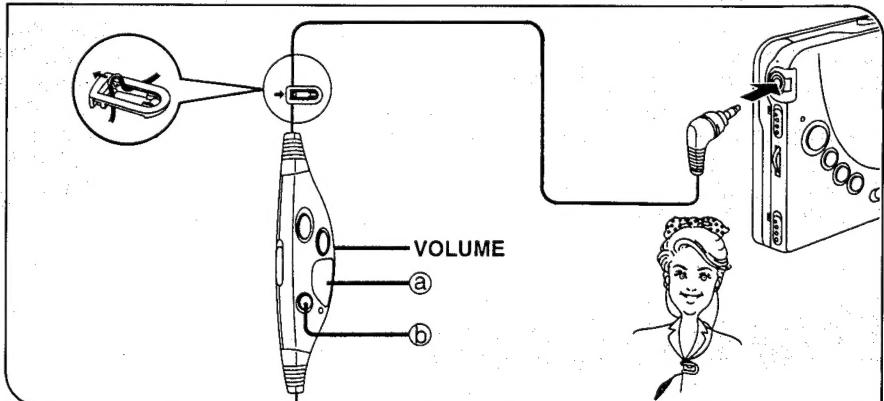
Before using those buttons, plug the stereo earphones into the Ω jack and be sure to release the hold state.

To adjust the volume

Before using the VOLUME on the remote control, be sure to adjust the volume control on the main unit to "5~7" position.

■ How to attach the cord clip

Fit the cord securely into the groove in the clip.

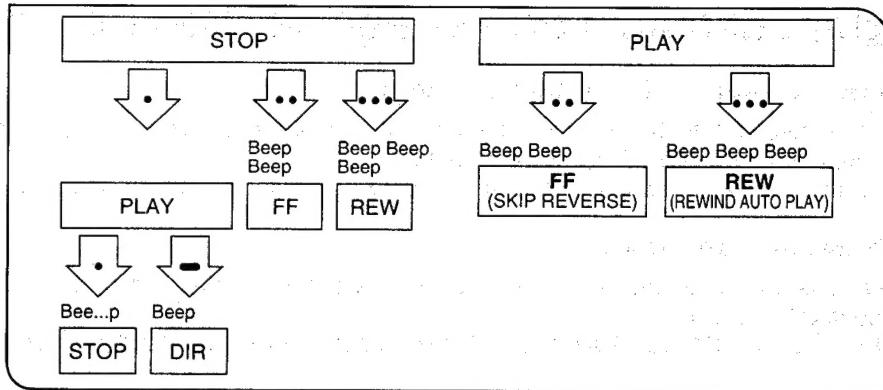


To change the tape operation

Press the tape operation button.

- : Press once to play and stop.
- : Press and hold to change the direction.
- : Press twice for fast forward.
- : Press three times for rewind.
- When pressing the button twice or three times in succession, press it within one second and at equal interval.

When it is pressed twice or three times during play, play will start from beginning of the tape (opposite or the same side).



POWER SOURCE

This player can operate on any of 2 different power sources:

1. Rechargeable battery (included)
2. Dry cell battery (not included)

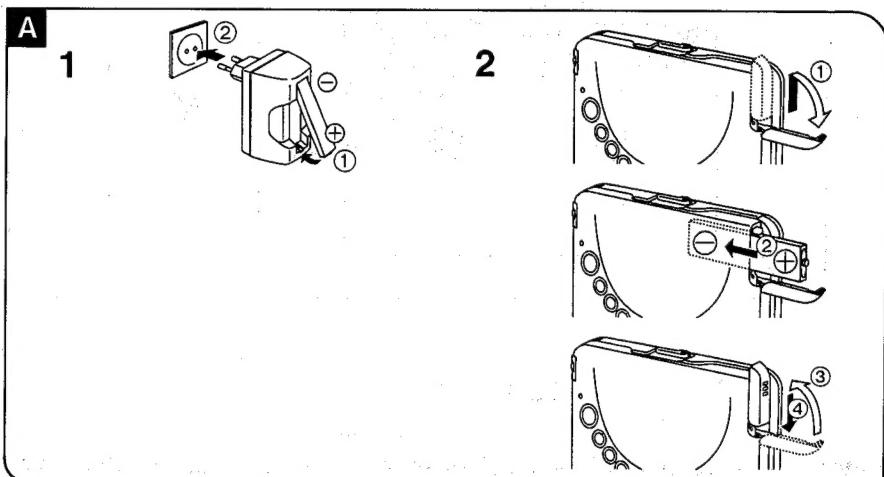
Rechargeable battery A

For its initial use after purchasing or after a long time interval (more than three months), be sure to recharge the rechargeable battery.

Normally 2 hours recharging will give approximately 5 hours 30 minutes tape playback (at 25°C).

1 Recharge the rechargeable battery.

2 Insert the charged battery into the unit.



Dry cell battery B

1 Insert a R6/LR6 battery (UM-3 or equivalent, not included) into the battery case.

2 Attach to the unit.

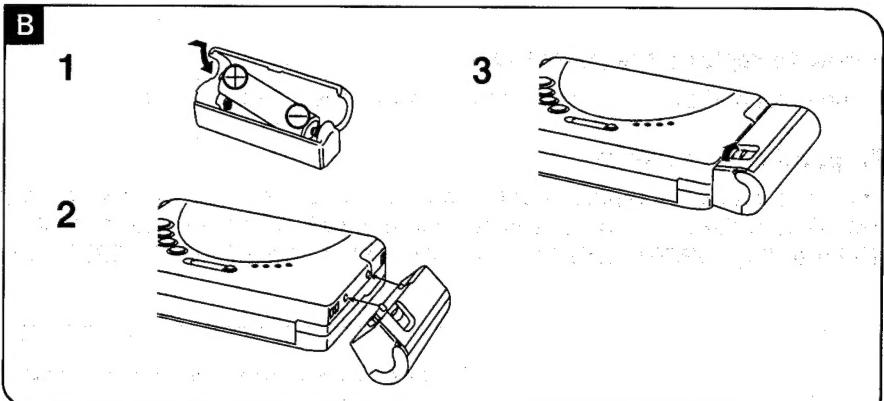
3 Turn the screw until it locks.

■ To extend the playback time

Install both types of battery (rechargeable and dry cell battery) in the unit.

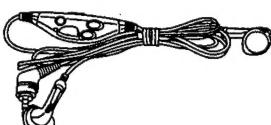
■ When the battery becomes weak

The OPR/BATT indicator will dim or turn off. Recharge the rechargeable battery or replace the dry cell battery with new one.

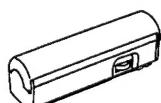


ACCESSORIES

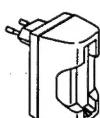
Stereo earphones with
remote controller 1 pc.
(RFEV122P-KS)



Battery case 1 pc.
(RFA0310-K2)



Charger 1 pc.
[RP-BC155EY-0 (E)] [RP-BC155EBYA (EB)]



Rechargeable battery 1 pc.
(RP-BP62EYS)



Carrying bag 1 pc.
(RFC0027-K)



Cord clip 1 pc.
(RGQ0090-K)



■ PROCEDURE FOR THE REPLACEMENT OF THE MECHANISM BLOCK

• How to replace the mechanism block

The mechanism block is supplied without other parts as a semi-assembly. The head block, motor and belt are supplied separately from the mechanism block.

If the mechanism block is exchanged as a replacement assembly, follow the preparation procedure below.

Preparation procedure

Remove the head block, motor and belt from the mechanism to be replaced and replace those parts to the new mechanism block.

(Refer to the "OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES".)

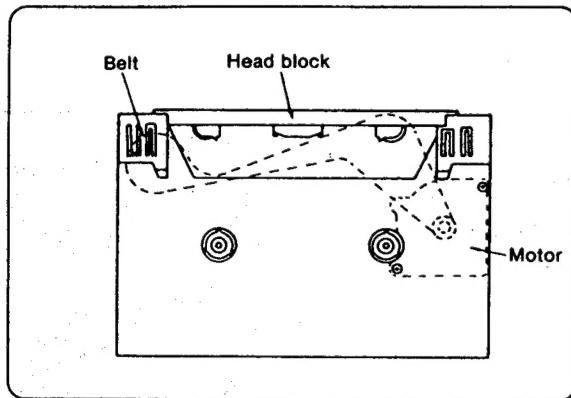
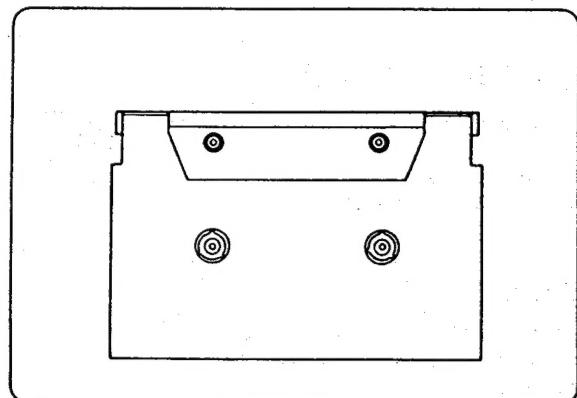


Fig. 1



Mechanism block

Fig. 2

Note: The adjustment of the mechanism block is unnecessary after replacement.

• How to replace the head block

The head and pinch roller are supplied together in the head block. The pinch roller is also supplied separately.

Preparation procedure

The head block for replacement is not supplied with a holder as shown in the figure below. Therefore, remove the holder from the block to be repaired and mount it to the new head block. Then, proceed to replace the head block.
(Refer to the "OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES".)

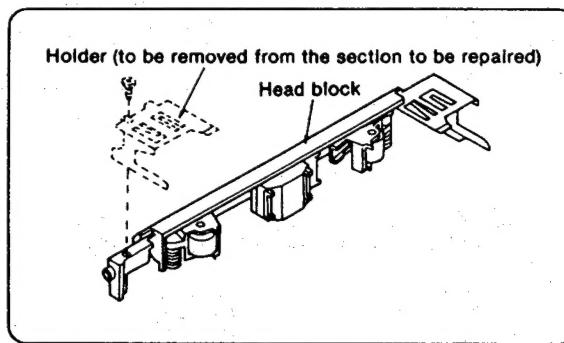


Fig. 3

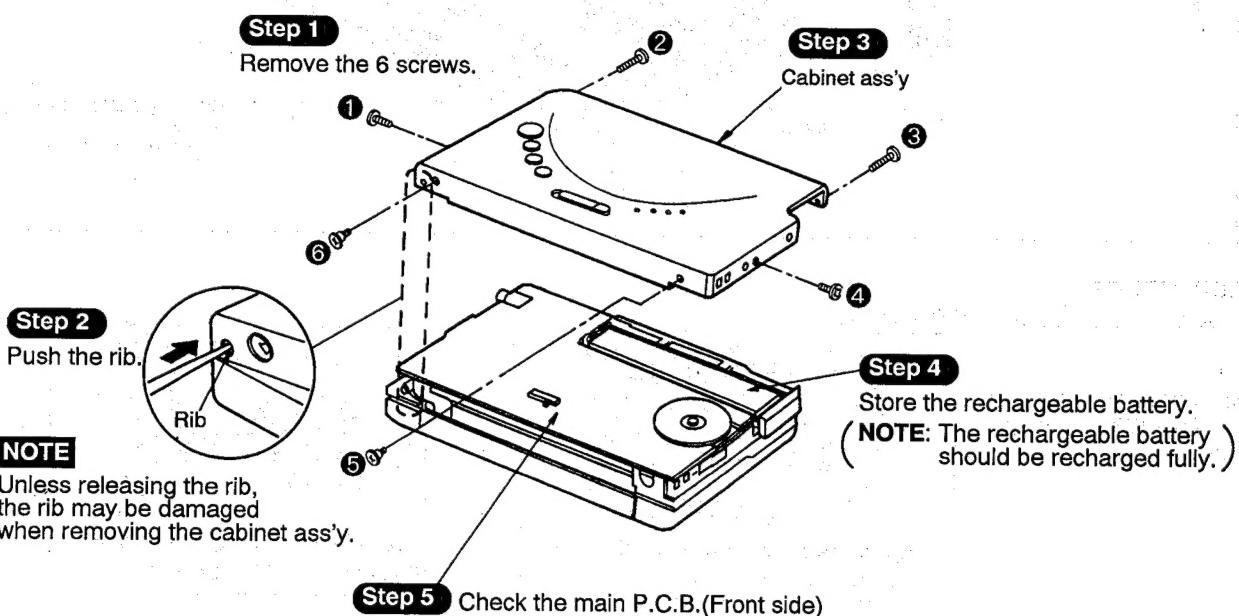
Note: Head azimuth adjustment is unnecessary.

■ OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

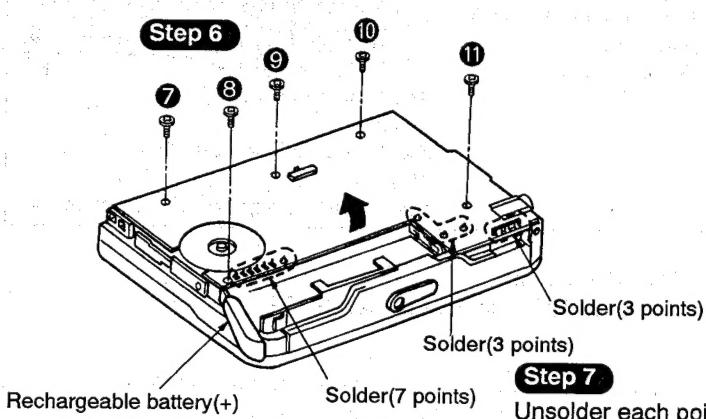
NOTE

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Illustrated screws are equivalent to actual size.
4. [] indicates parts No.

1. Checking for the main P.C.B.

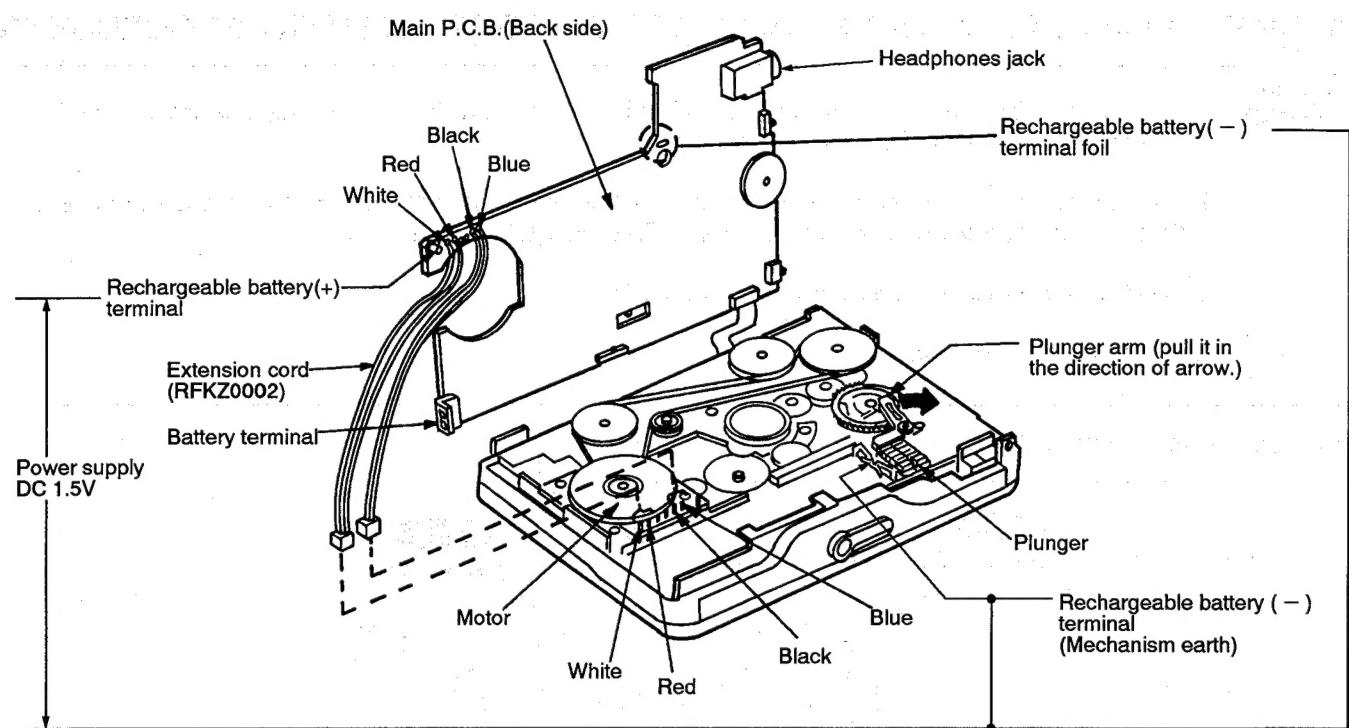


Removal for checking the main P.C.B.(Back side)


NOTE

When the main P.C.B. is removed, the rechargeable battery terminal(+) will also be removed.

①, ④	②, ③
Screw φ 1.4 × 2.5mm	Screw φ 1.4 × 3mm
⑤, ⑥	⑦ ~ ⑪
Screw	Screw φ 1.4 × 3mm

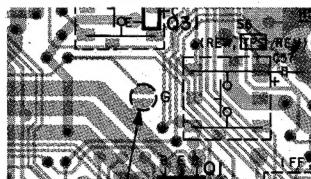


■ Short Points

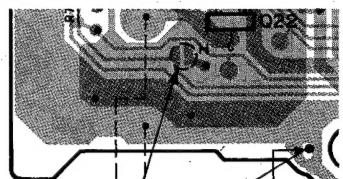
- Solder the short land to shrot the circuit.

Note:

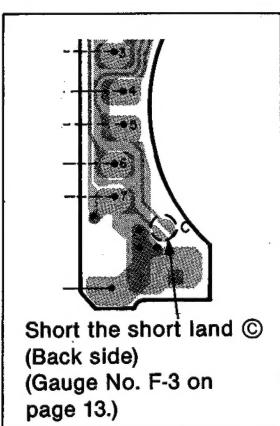
This diagram shows a front view of the IC3 mounting surface.



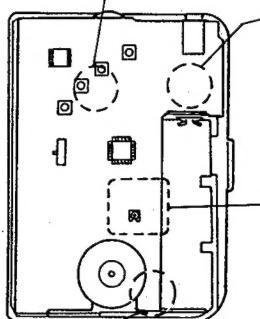
Short the short land **C** (Back side)
(Gauge No. B-4 on page 14.)



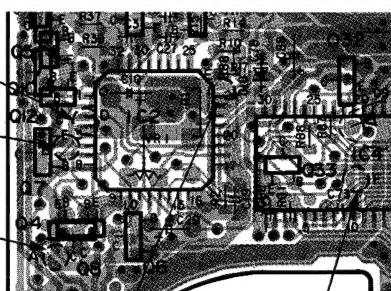
Short the short land **H** (Back side)
(Gauge No. B-2 on page 13.)



Short the short land **F** (Back side)
(Gauge No. F-3 on page 13.)



Short the short land **D** (Back side)
(Gauge No. G-3 on page 13.)
Short the short land **E** (Back side)
(Gauge No. E-3 on page 13.)
Short the short land **G** (Back side)
(Gauge No. E-3 on page 13.)



Short the short land **D** (Back side)
(Gauge No. D-3 on page 14.)
Short the short land **E** (Back side)
(Gauge No. E-4 on page 14.)

Mechanism Mode Setting

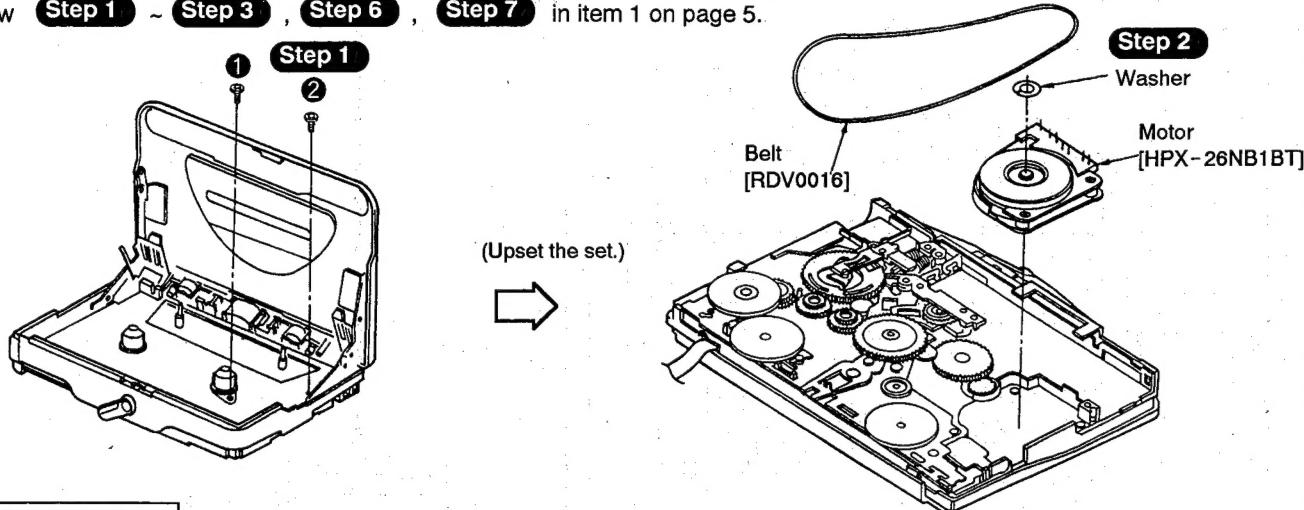
- Manually operate the plunger arm when checking the PLAY/STOP operation.
- Manually pulling the plunger arm once sets the FWD mode; twice, REV ; and, three times, STOP.

NOTE

- Operate the plunger arm manually. Even if the operation buttons are pressed, the plunger will not be actuated.
- Even if the mechanism unit is switched to the FWD mode, the head change – over switch (IC1) will remain in the REV position, so set the REV mode to check the audio.
Before checking the operation problems and adjustments, be sure to release the hold state.
(Hold switch(S3): OFF)
- After checking, unsolder the short land **A**, **B**, **C**, **D**, **E**, **F**, **G** and **H**.

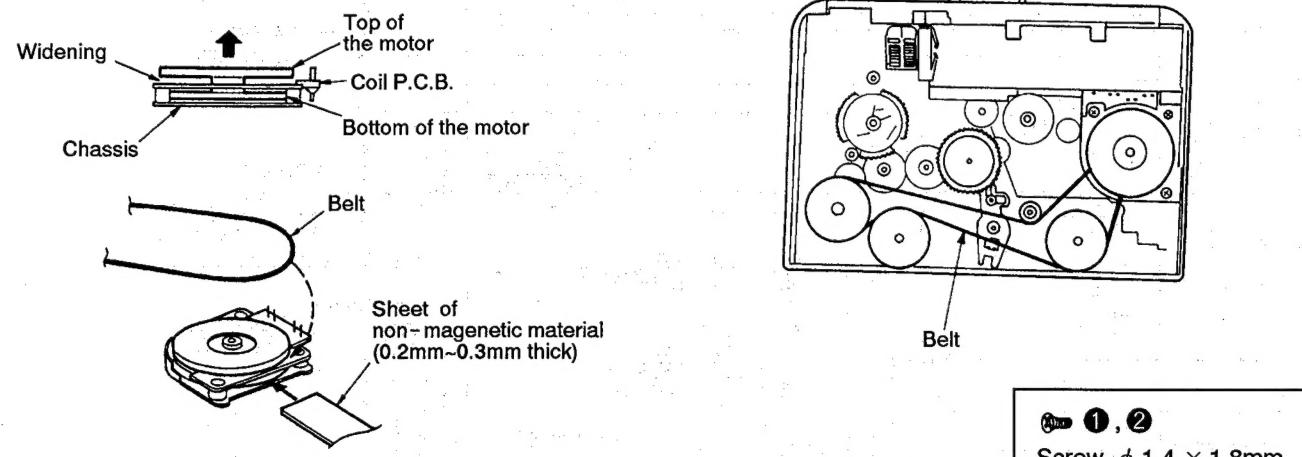
2. Replacement for the motor and belt

- Follow Step 1 ~ Step 3, Step 6, Step 7 in item 1 on page 5.



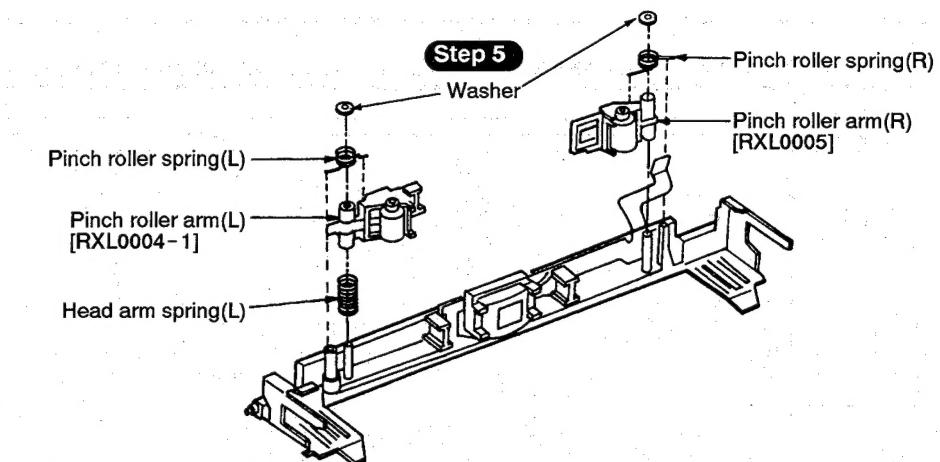
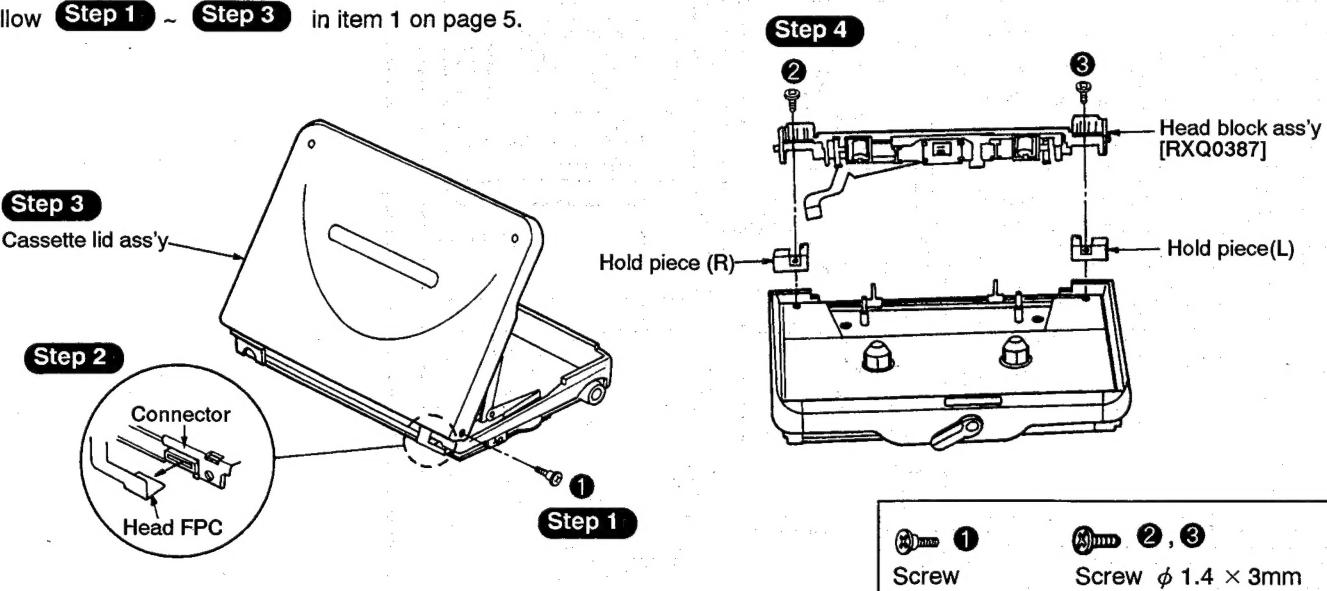
Installing the belt

- When install the belt to motor, push up the motor by insert the non-magnetic material sheet between bottom of the motor and the chassis, and install the belt between top of the motor and the coil P.C.B..



3. Replacement for the head block ass'y and pinch roller

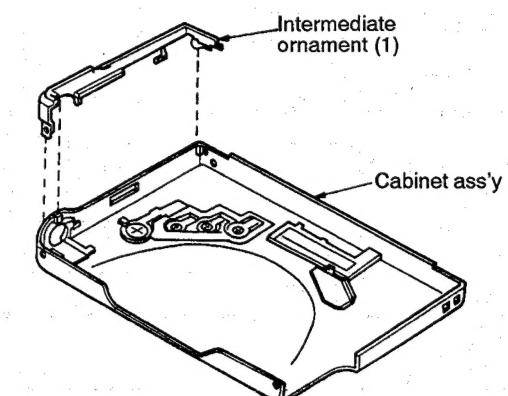
- Follow Step 1 ~ Step 3 in item 1 on page 5.



Assembling Procedure for cassette lid ass'y and cabinet ass'y after checking/parts replacement

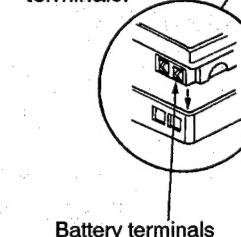
Step 1

- Install the intermediate ornament (1).



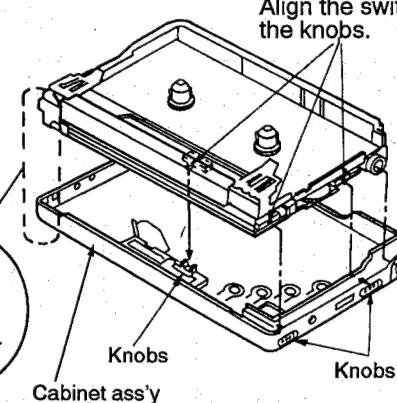
Step 4

- Take care not to damage the battery terminals.



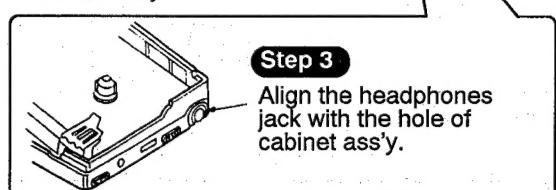
Step 2

- Align the switch bosses with the knobs.



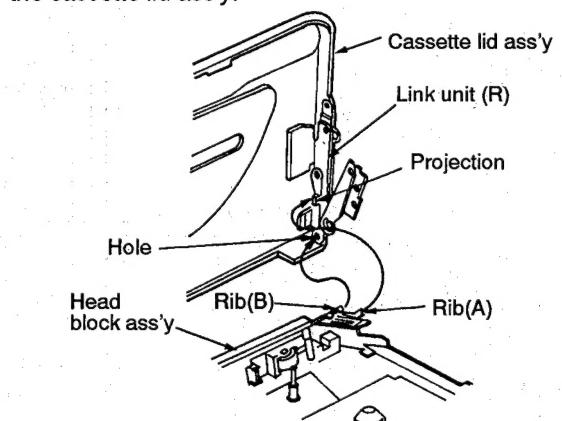
Step 3

- Align the headphones jack with the hole of cabinet ass'y.



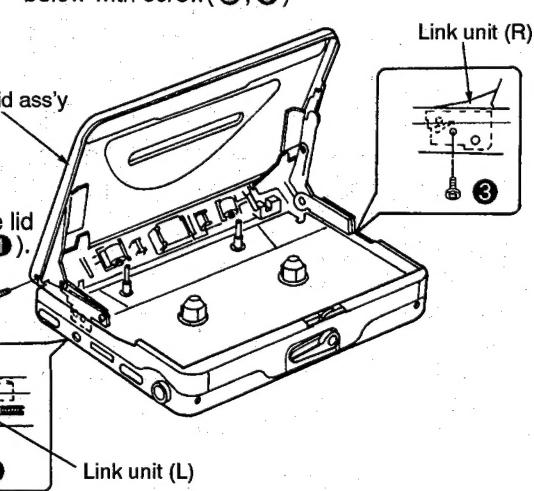
Step 5

- Align the rib (A) and (B) of head block ass'y with the projection and hole of link unit, and then install the cassette lid ass'y.



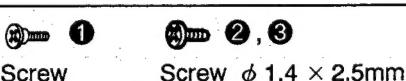
Step 7

- Install the link unit(L),(R) as shown below with screw(2, 3)



Step 6

- Install the cassette lid ass'y with screw(1).



MEASUREMENTS AND ADJUSTMENTS

● ADJUSTMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENTS

1. Set volume control to maximum.
2. Set Dolby NR Switch to OFF.
3. Release the hold state. (Refer to page 2)
4. Set power source voltage to 1.5V DC.

● CONTROL POSITIONS AND EQUIPMENT USED

1. Frequency counter

● TAPE SECTION

ITEM	TEST TAPE	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
Tape speed adjustment	QZZCWAT (3kHz, -10dB)	Connect the frequency counter to Headphones jack (16Ω) (Refer to Fig. 1)	VR1 (Refer to Fig. 2)	Playback the central part of the tape and adjust VR1 so that the tape speed is as follows. Forward: 3000 ± 10 Hz Reverse: $2940 \sim 3050$ Hz Make sure that the frequency range is within ± 60 Hz for between "Forward" and "Reverse" mode.

Note: The playback head is supplied on the head arm assembly. (See the Mechanism parts location on page 17.)
The assembly requires no adjustment.

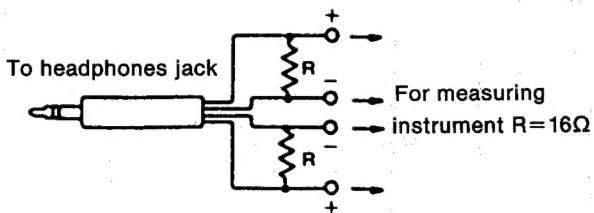


Fig. 1

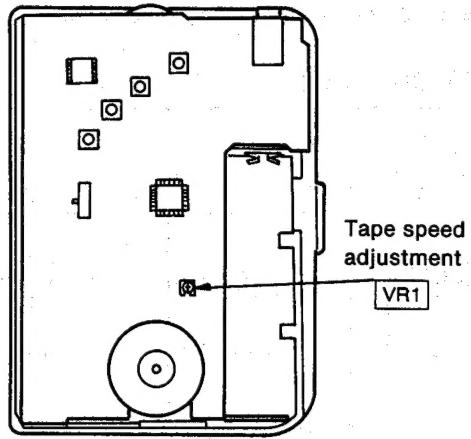


Fig. 2

SCHEMATIC DIAGRAM

(See parts list on pages 19, 20.)

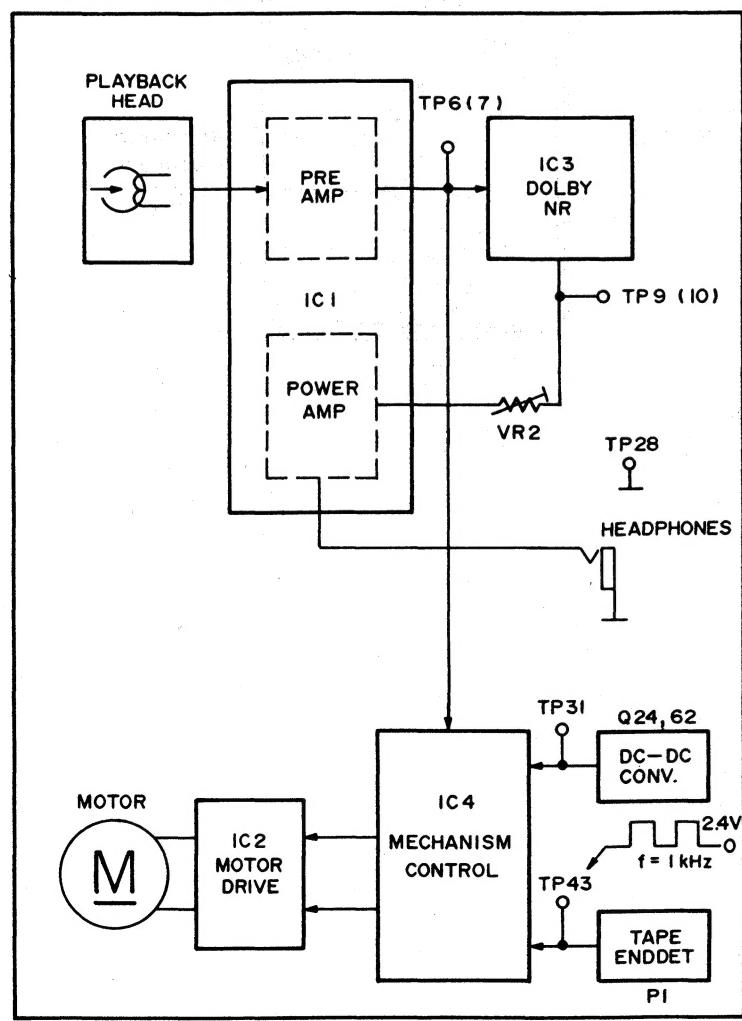
(This schematic diagram may be modified at any time with development of new technology.)

Notes:

- **S3** : HOLD (PUSH HOLD) switch in "OFF" position.
- **S4** : Play/direction ($\blacktriangleleft \blacktriangleright$) switch.
- **S5** : Fast forward (FF) switch.
- **S6** : Rewind (REW) switch.
- **S7** : Stop (■) switch.
- **S8** : FWD/REV switch in "FWD" position.
- **S9** : Play mode selector (BLANK SKIP, REVERSE MODE) in " $\square \square$ " position.
(ON: $\square \square$, OFF: \square)
- **S10** : Dolby noise reduction (\square NR) switch in "OFF" position.
- **S11-1** : Tape detector (OPEN/CLOSE) switch in "OPEN" position.
- **S11-2** : Tape detector (METAL/NORMAL) switch in "OFF(METAL)" position.
- **VR1** : Tape speed adjustment.
- **VR2** : Volume adjustment.
- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.

No mark... Playback.

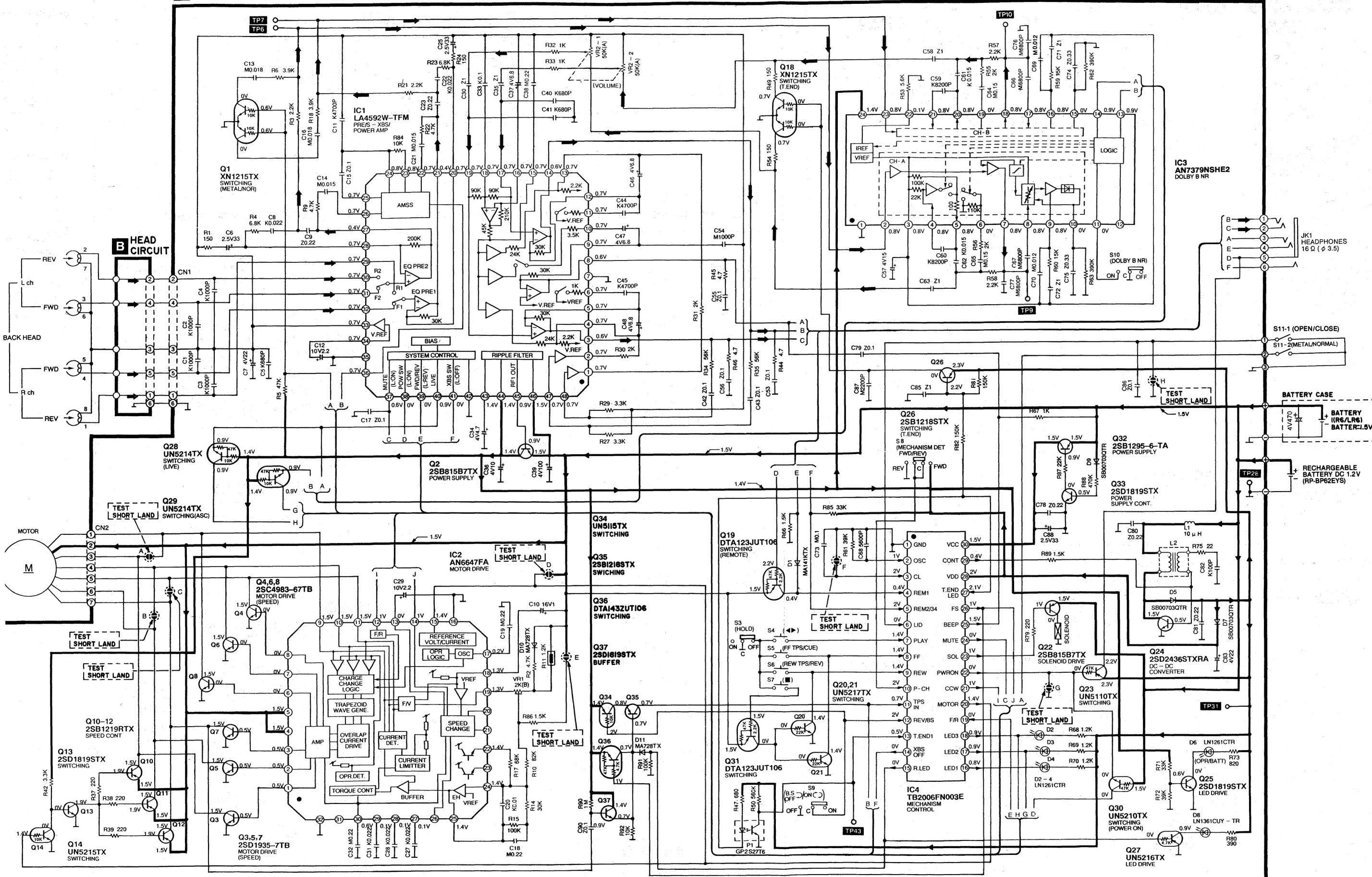
• BLOCK DIAGRAM



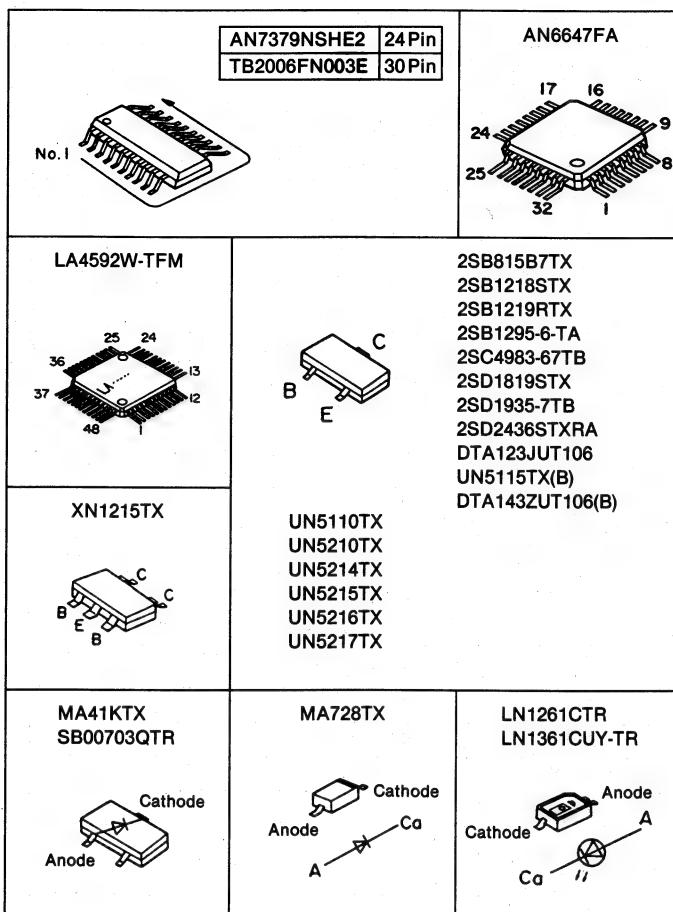
- 10 -

- 11 -

A MAIN CIRCUIT(PRE AMP/S-XBS/POWER AMP/DOLBY NR/MOTOR DRIVE/MECHANISM CONTROL/DC-DC CONVERTER)



• Terminal guide of IC's, transistors and diodes

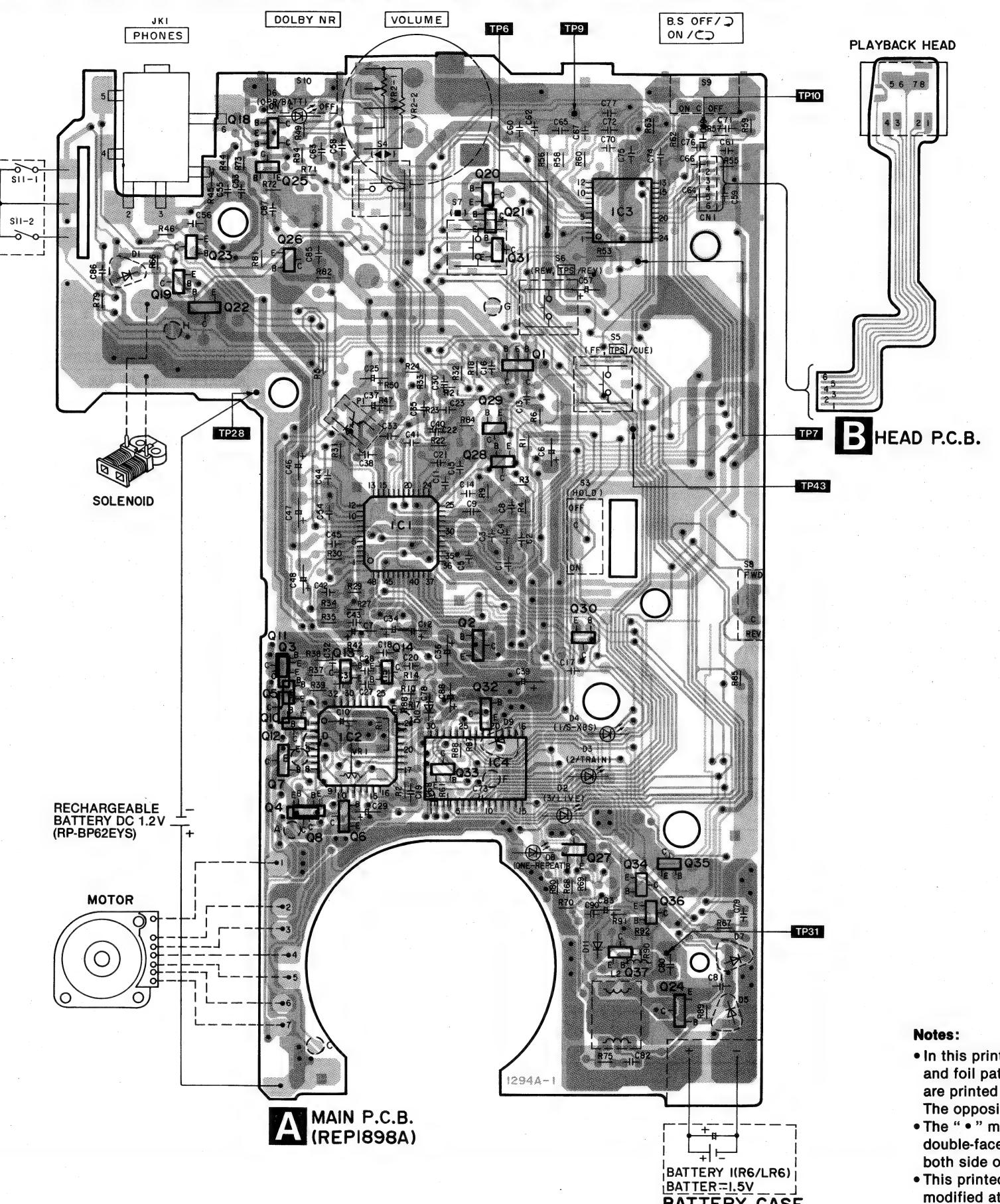


• CHECK POINT OF SIGNAL

CHECK ITEM	TEST POINT
HEAD → PRE OUTPUT	Lch TP7
	Rch TP6
	GND TP28
PRE OUTPUT → DOLBY NR OUTPUT	Lch TP10
	Rch TP9
	GND TP28
DOLBY NR OUTPUT → VR INPUT	Lch VR TERMINAL
	Rch VR TERMINAL
	COM VR TERMINAL
VR INPUT → VR OUTPUT	Lch VR TERMINAL
	Rch VR TERMINAL
	COM VR TERMINAL
POWER AMP → HEADPHONE OUTPUT	Lch HP TERMINAL
	Rch HP TERMINAL
	COM HP TERMINAL
DC-DC CONVERTER (BOOSTER)	2.4V OUTPUT TP31
	GND TP28
PHOTO COUPLER (END)	PULSE OUTPUT TP43

■ PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

A

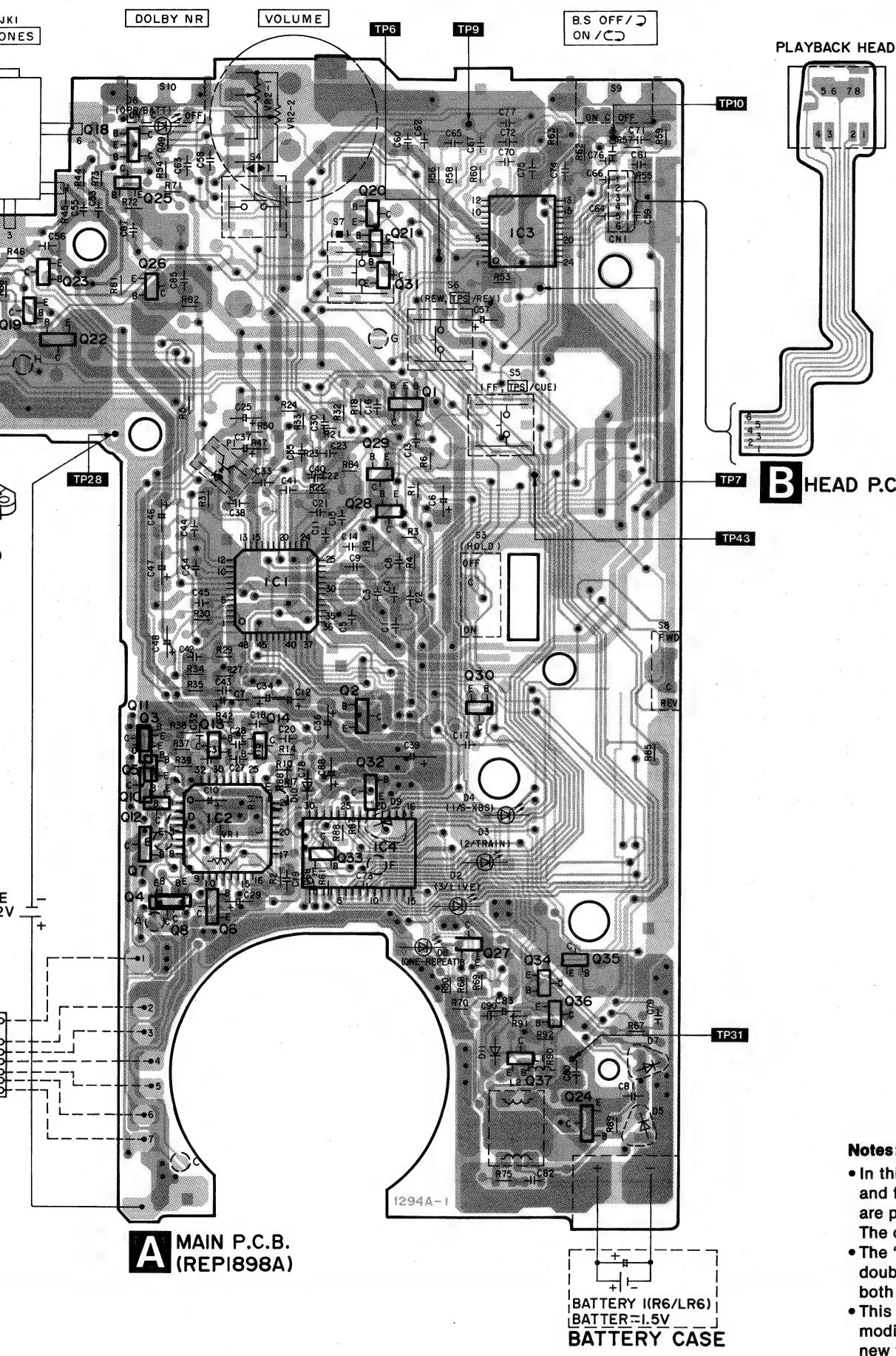


Notes:

- In this printed circuit board diagram, the parts and foil patterns on the board facing toward you are printed in black. The opposite side is printed in blue.
- The “•” mark denotes the connection points of double-faced foil patterns (through holes) on both sides of the printed circuit board.
- This printed circuit board diagram may be modified at any time with the development of new technology.

Pin No.	Mark
1	GND
2	OSC
3	CL
4	REM1
5	REM2/34
6	LID
7	PLAY
8	FF
9	REW
10	P-CH
11	TPS IN
12	REV/BS
13	T. END1
14	XBSOFF

JIT BOARDS AND WIRING CONNECTION DIAGRAM



Notes:

- In this printed circuit board diagram, the parts and foil patterns on the board facing toward you are printed in black. The opposite side is printed in blue.
- The “•” mark denotes the connection points of double-faced foil patterns (through holes) on both sides of the printed circuit board.
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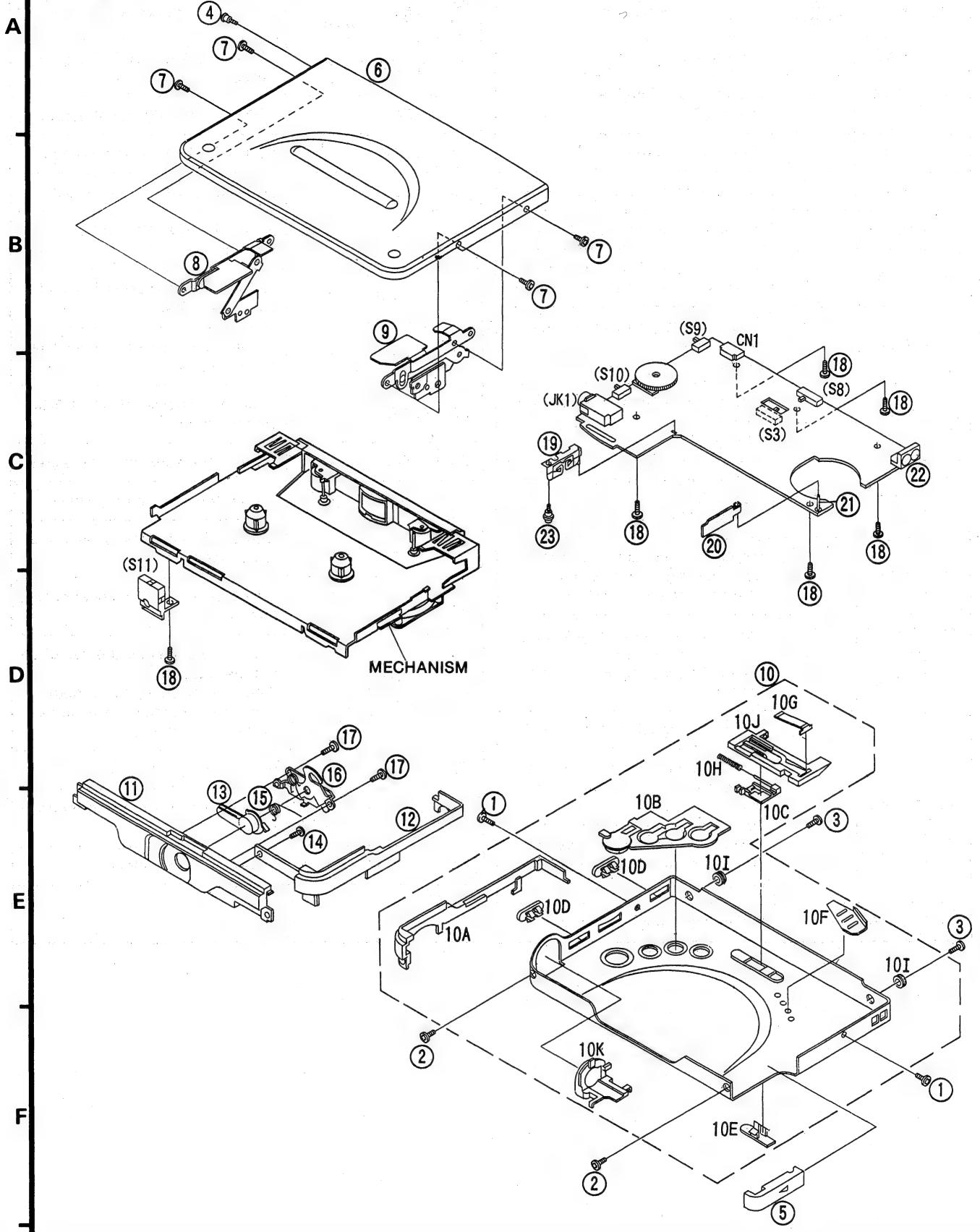
■ TERMINAL FUNCTION OF IC

- IC4 (TB2006FN003E): Mechanism control

Pin No.	Mark	I/O Division	Function
1	GND	—	GND terminal
2	OSC	I	System clock terminal fosc=3.2kHz
3	CL	I	Clear (reset) terminal
4	REM1	I	Inputs the remote control signal
5	REM2/34	I	Inputs the remote control signal
6	LID	I	Detection signal whether the cassette tape is inserted
7	PLAY	I	Inputs the mechanism operation signal (PLAY) At high: PLAY
8	FF	I	Inputs the mechanism operation signal (FF) At high: FF
9	REW	I	Inputs the mechanism operation signal (REW) At high: REW
10	P-CH	I	Inputs the mechanism status detection signal (FWD/REV) At high: FWD, At low: REV
11	TPS IN	I	Inputs the TPS detection terminal
12	REV/BS	I	Inputs the play mode detection terminal
13	T. END1	I	Inputs the signal for the detection of tape rotation. When the pulse signal is input: The current mode remains set as the tape is rotating. No pulse signal: Stops or starts reverse playback as the tape has stopped rotating (ie, reached the end).
14	XBSOFF	O	S-XBS control signal output

Pin No.	Mark	I/O Division	Function
15	R. LED	O	LED drive (ONE-REPEAT) signal output
16	LED1	O	LED drive (S-XBS) signal output
17	LED2	O	LED drive (TRAIN) signal output
18	LED3	O	LED drive (LIVE) signal output
19	F/R	I	Inputs the FWD/REV select terminal
20	MOTOR	O	Motor drive (MOTOR ON) signal output terminal
21	CCW	O	Outputs the reversing motor drive control signal
22	PWRON	O	Change the power (POWER ON) signal output
23	SOL	O	Outputs the solenoid drive signal
24	MUTE	O	Output the amp. muting signal
25	BEEP	O	Outputs the confirming beep when remote control.
26	FS	O	Motor speed control signal output terminal
27	T. END LED	I	Inputs the signal for the detection of tape rotation. When the pulse signal is input: The current mode remains set as the tape is rotating.
28	VDD	I	Power supply terminal
29	CONT	O	Outputs the DC-DC converter drive signal
30	VCC	I	Power supply terminal

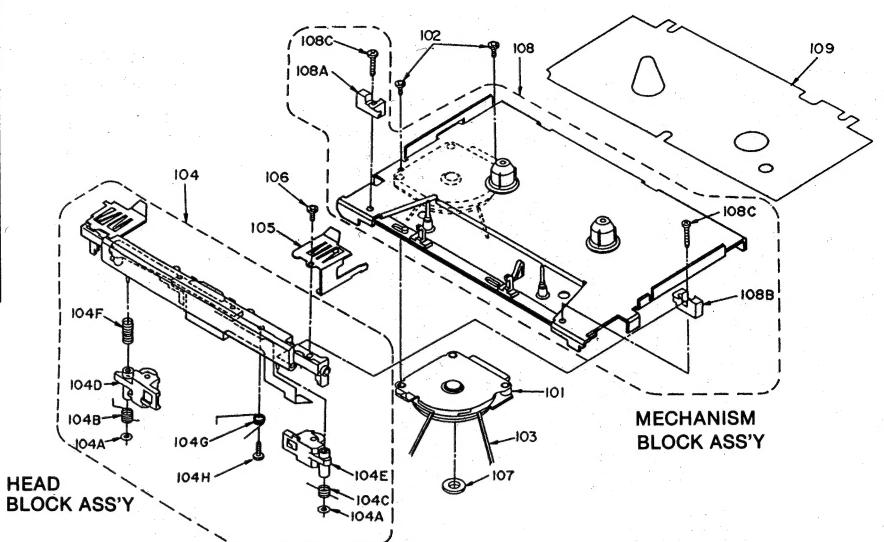
1 2 3 4 5

CABINET PARTS LOCATION

MECHANISM PARTS LOCATION

	FWD & REV mode
Wow and flutter	0.3% (WRMS)
Pressure of pinch roller	120 ± 20 g
Take-up tension	More than 60g
Playback torque	20^{+15}_{-5} g·cm
FF/REW torque	More than 60g·cm

The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately except parts indicated with Ref. No.

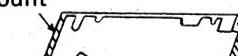
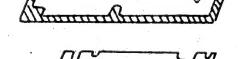


■ How to apply the Mechanism Sheet

1. Replacing/Repairing of a mechanism block.
Replace or repair using a shared mechanism block.(The replacing/repairing procedure remains the same.)
2. If after repairing with a shared mechanism block, a user complains that the mechanism sheet is different from the original, do the following:
 - (1) Explain that the number of replacement parts has been consolidated.
 - (2) Attach an original mechanism sheet covering the mechanism sheet already attached to the shared mechanism block. (Doubling, doubling does not affect the unit's performance.)
 - Never attach another mechanism sheet to the doubled mechanism sheets.
 - Never remove the already attached sheet. Adhesive material cannot be removed completely.
 - Position the sheet carefully, when attaching it.

■ Attaching instructions

You can attach the mechanism sheet smoothly if you position the attachment line on the side where the head is to be installed.

Procedure 1: (Preparation)	Peel off the sheet from mount.	Mount 
Procedure 2: (Positioning)	Fit the encircled marks of an original sheet with those of sheet already attached.	
Procedure 3: (Attachment)	Attach the sheet.	

Note:

AR90IV is used in the mechanism of Model RQ-SX3.

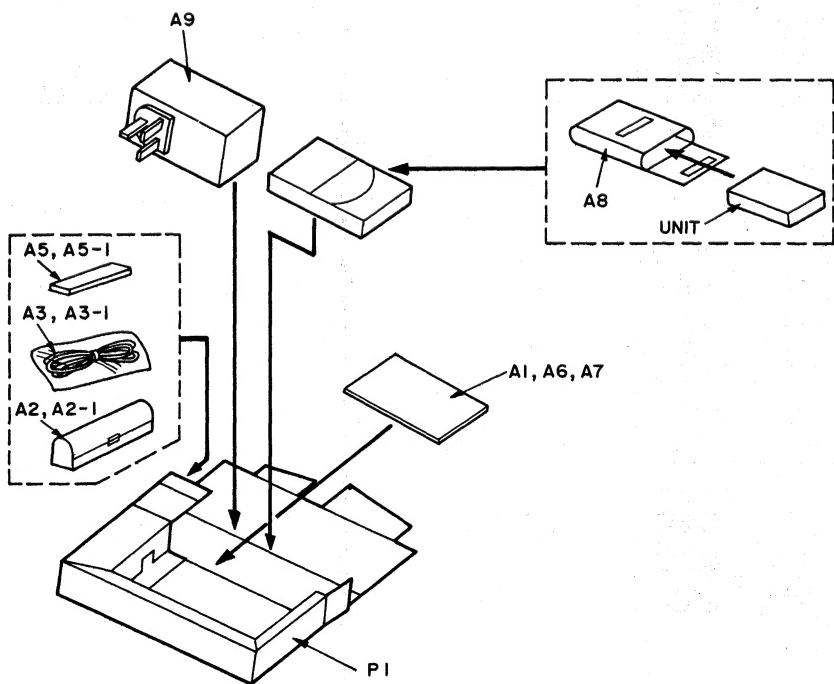
When preparing for service, please check the parts list and order necessary parts.

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RHE5155YA	SCREW	
2	RHE5169YA	SCREW	
3	RHQ0043-K	SCREW	
4	RHQ0044-K	SCREW	
5	RKK0068-K	BATTERY COVER	
6	RFKLQSX3-K	CASSETTE LID ASS'Y	
7	RHQ0048-K	SCREW	
8	RXM0050	LINK UNIT(L)	
9	RXM0051	LINK UNIT(R)	
10	RYK0466-K	CABINET ASS'Y	
10A	RGKD625-H	INTERMEDIATE ORNAMENT(1)	
10B	RGU1041-H	MECHANISM BUTTON	
10C	RCU1061-H	RELEASE KNOB	
10D	RGV0106-K	MODE/NR KNOB	
10E	RGV0132-H	HOLD KNOB	
10F	RKW0337-Q	LED PLATE	
10G	RMB0363	HOLD SPRING	
10H	RMC0241	RELEASE SPRING	
10I	RMG0362-K	FLOATING RUBBER	
10J	RMQ0447	HOLD SLIDER	
10K	RMR0762-K	JACK PIECE	
11	RGKD626-H	INTERMEDIATE ORNAMENT(2)	
12	RGK0638-H	INTERMEDIATE ORNAMENT(3)	
13	RGV0133-K	OPEN LEVER	
14	RHE5079ZA	SCREW	
15	RMB0362	AUTO RETURN SPRING	
16	RXQ0358	LOCK UNIT	

Ref. No.	Part No.	Part Name & Description	Remarks
17	XQN14+CJ3FZ	SCREW	
18	RHE5119ZA	SCREW	
19	RJC99004-2	RECHARGEABLE BATT. TER(-)	
20	RJC99024	RECHARGEABLE BATT. TER(+)	
21	RJR0012	SHAFT	
22	RJH9206	CONNECTION TERMINAL	
23	RHQ0013-1	SCREW	
		MECHANISM	
101	HPX-26NB1BT	MOTOR	
102	XQS14+A18FZ	SCREW	
103	RDV0016	BELT	
104	RXQ0387	HEAD BLOCK ASS'Y	
104A	RNW1012A	WASHER	
104B	RME0125	PINCH ROLLER SPRING(L)	
104C	RME0005	PINCH ROLLER SPRING(R)	
104D	RXL0004-1	PINCH ROLLER ARM(L)	
104E	RXL0005	PINCH ROLLER ARM(R)	
104F	RMB0245	HEAD ARM SPRING(L)	
104G	RME0114	HEAD ARM SPRING(R)	
104H	RHD14032-1	SCREW	
105	RMA0784	HOLDER(R)	
106	XQN14+A3	SCREW	
107	RHW42002-2	WASHER	
108	RFKRQSX3-K	MECHANISM BLOCK ASS'Y	
108A	RMQ0292	HOLD PIECE(L)	
108B	RMQ0293	HOLD PIECE(R)	
108C	RHD14031	SCREW	
109	RKN0077-K	MECHANISM SHEET	

PACKAGING



REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	LA4592W-TFM	PRE/S-XBS/POWER AMP	
IC2	AN6647FA	MOTOR DRIVE	
IC3	AN7379NSHE2	DOLBY B NR	
IC4	TB2006FN003E	MECHANISM CONTROL	
		TRANSISTOR(S)	
Q1	XN1215TX	TRANSISTOR	
Q2	2SB815B7TX	TRANSISTOR	
Q3	2SD1935-7TB	TRANSISTOR	
Q4	2SC4983-67TB	TRANSISTOR	
Q5	2SD1935-7TB	TRANSISTOR	
Q6	2SC4983-67TB	TRANSISTOR	
Q7	2SD1935-7TB	TRANSISTOR	
Q8	2SC4983-67TB	TRANSISTOR	
Q10-12	2SB1219RTX	TRANSISTOR	
Q13	2SD1819STX	TRANSISTOR	
Q14	UN5215TX	TRANSISTOR	
Q18	XN1215TX	TRANSISTOR	
Q19	DTA123JUT106	TRANSISTOR	
Q20, 21	UN5217TX	TRANSISTOR	
Q22	2SB815B7TX	TRANSISTOR	
Q23	UN5110TX	TRANSISTOR	
Q24	2SD2436STXRA	TRANSISTOR	
Q25	2SD1819STX	TRANSISTOR	
Q26	2SB1218STX	TRANSISTOR	
Q27	UN5216TX	TRANSISTOR	
Q28, 29	UN5214TX	TRANSISTOR	
Q30	UN5210TX	TRANSISTOR	
Q31	DTA123JUT106	TRANSISTOR	
Q32	2SB1295-6-TA	TRANSISTOR	
Q33	2SD1819STX	TRANSISTOR	
Q34	UN5115TX	TRANSISTOR	
Q35	2SB1218STX	TRANSISTOR	
Q36	DTA143ZUT106	TRANSISTOR	
Q37	2SD1819STX	TRANSISTOR	
		DIODE(S)	
D1	MA141KTX	DIODE	
D2-4	LN1261CTR	L. E. D.	
D5	SB00703QTR	DIODE	
D6	LN1261CTR	DIODE	
D7	SB00703QTR	DIODE	

RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R85	ERJ3GEYJ333V	1/16W 33K	C55, 56	ECUV1C104ZFN	16V 0.1U			
R86	ERJ3GEYJ152V	1/16W 1.5K	C57	RCSX0GY156RE	4V 15U			
R87	ERJ3GEYJ223V	1/16W 22K	C58	ECUV1C105ZFN	16V 1U			
R88	ERJ3GEYJ474V	1/16W 470K	C59, 60	ECUV1E822KBV	25V 8200P			
R89	ERJ3GEYJ152V	1/16W 1.5K	C61, 62	ECUV1E153KBV	25V 0.015U			
R90	ERJ3GEYJ105V	1/16W 1M	C63	ECUV1C105ZFN	16V 1U			
R91	ERJ3GEYJ104V	1/16W 100K	C64, 65	ECUV1C154MBN	16V 0.15U			
R92	ERJ3GEYJ103V	1/16W 10K	C66, 67	ECUV1H682MBV	50V 6800P			
			C68	ECUV1H562KBV	50V 5600P			
			C69, 70	ECUV1C123MBV	16V 0.012U			
			C71, 72	ECUV1C105ZFN	16V 1U			
			C73	ECUV1E104MBN	25V 0.1U			
			C74, 75	ECUV1C334ZFN	16V 0.33U			
			C76, 77	ECUV1H682MBV	50V 6800P			
			C78	ECUV1C224ZFN	16V 0.22U			
			C79	ECUV1C104ZFN	16V 0.1U			
			C80, 81	ECUV1C224ZFN	16V 0.22U			
			C82	ECUV1H101KCV	50V 100P			
			C83	RCSX0GY226RE	4V 22U			
			C85	ECUV1C105ZFN	16V 1U			
			C86	ECUV1C104ZFN	16V 0.1U			
			C87	ECUV1H222MBV	50V 2200P			
			C88	ECSTOEVY336RR	2.5V 33U			
			C90	ECUV1C104ZFN	16V 0.1U			

REPLACEMENT PARTS LIST

Notes: *Important safety notice:
 Components identified by Δ mark have special characteristics important for safety.
 Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
 When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
 *The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
 Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIAL		A4	RKB205ZA-0	EAR PADS	
P1	RPK0519	PACKING CASE		A5	RP-BP62EYS	RECHARGEABLE BATTERY	
		ACCESSORIES		A5-1	RFA0475-Q	RECHARGE. BATT. CARRYING CASE	
A1	RFKSQSX3E-K	INSTRUCTION MANUAL ASS'Y	(E)	A6	RQA0013A	WARRANTY CARD	
A1	RQT2586-B	INSTRUCTION MANUAL	(EB)	A7	RQCB0169	SERVICENTER LIST	
A2	RFA0310-K2	BATTERY CASE		A8	RFC0027-K	CARRYING BAG	
A2-1	RKK0053-K	BATTERY COVER		A9	RP-BC155EY-0	CHARGER	(E) Δ
A3	RFEV122P-KS	STEREO EARPHONES WITH R.C.		A9	RP-BC155EYBA	CHARGER	(EB) Δ
A3-1	RGQ0090-K	CORD CLIP				<PRINTED CIRCUIT BOARDS	
						ASS'Y>	
				PCB1	REP1898A	MAIN P. C. B. ASS'Y	(RTL)

* This item is not attached to merchandise, but it is supplied as a replacement part.

- The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

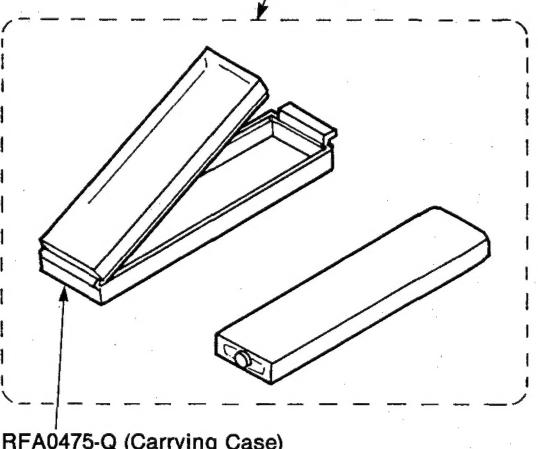
SUPPLY OF RECHARGEABLE BATTERY AS REPLACEMENT PARTS

Please take note of the following points relating to Carrying Case to be used for protection of Rechargeable Battery from shorting.

Replacement Parts:

- Rechargeable Battery (RP-BP62EYS) to be supplied will be provided with Carrying Case (RFA0475-Q).
- No replacement parts will be supplied for Rechargeable Battery without Carrying Case.
- Replacement parts will be supplied for Carrying Case (RFA0475-Q) without Rechargeable Battery.
- To your customers, delivery Rechargeable Battery together with Carrying Case to prevent shorting accidents that may occur when Rechargeable Battery is carried about without Carrying Case.

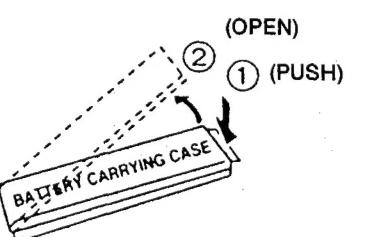
RP-BP62EYS (Rechargeable Battery with Carrying Case)



RFA0475-Q (Carrying Case)

CAUTION IN USE OF RECHARGEABLE BATTERY

- Take Rechargeable Battery out of Carrying Case and use it.
- Be sure to carry Rechargeable Battery in this Carrying Case. If not, it may either heat or ignite by shorting with a metal.



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